

REMARKS

In light of the following remarks, reconsideration of the present application is requested. Claims 1-32 are pending in this application. Claims 1, 11, 18, 24, 27 and 30 are independent claims. Claims 11 and 27 have been amended. No new matter has been added.

Claim Rejections under 35 U.S.C. §101

Claims 11-17 stand rejected under 35 U.S.C. §101 as being directed to nonfunctional descriptive material. Applicants respectfully traverse this rejection.

Applicants respectfully submit that "a computer readable medium having an executable data structure for managing reproduction of images by a reproducing device," as recited in independent claim 11, recites functional descriptive material.

MPEP § 2106.01 states the following.

In this context, "functional descriptive material" consists of **data structures** and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited music, literary works and a compilation or mere arrangement of data.

(emphasis added)

Data structures recorded on a computer readable medium may constitute statutory subject matter.

MPEP § 2106.01 goes on further to state:

Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, [*In re Warmerdam*,] 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory

product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

In view of the above, a more detailed discuss of In re Warmerdam and In re Lowry is warranted.

Discussion of In re Warmerdam

Claim 1 of In re Warmerdam recited:

1. A method for generating a data structure which represents the shape of [sic] physical object in a position and/or motion control machine as a hierarchy of bubbles, comprising the steps of:

first locating the medial axis of the object; and

then creating a hierarchy of bubbles on the medial axis.

Claim 6 of In re Warmerdam recited:

6. A data structure generated by the method of any of Claims 1 through 4.

With respect to claim 1, the court found both steps drawn strictly to mathematical equations, and therefore non-statutory abstract ideas. In re Warmerdam, at 1759. The court went on to find that the data structure of claim 6 suffers from the same defect.

Discussion of In re Lowry

Claim 1 of In re Lowry recited:

1. A memory for storing data for access by an application program being executed on a data processing system, comprising:

a data structure stored in said memory, said data structure including information resident in a database used by said application program and including:

a plurality of attribute data objects stored in said memory, each of said attribute data objects containing different information from said database;

a single holder attribute data object for each of said attribute data objects, each of said holder attribute data objects being one of said plurality of attribute data objects, a being-held relationship

existing between each attribute data object and its holder attribute data object, and each of said attribute data objects having a being-held relationship with only a single other attribute data object, thereby establishing a hierarchy of said plurality of attribute data objects;

a referent attribute data object for at least one of said attribute data objects, said referent attribute data object being nonhierarchically related to a holder attribute data object for the same at least one of said attribute data objects and also being one of said plurality of attribute data objects, attribute data objects for which there exist only holder attribute data objects being called element data objects, and attribute data objects for which there also exist referent attribute data objects being called relation data objects; and

an apex data object stored in said memory and having no being-held relationship with any of said attribute data objects, however, at least one of said attribute data objects having a being-held relationship with said apex data object.

In finding that the printed matter cases have no factual relevance to the claims at issue in In re Lowry, the court stated:

Nor are the data structures analogous to printed matter. Lowry's ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.

In re Lowry, at 1034.

The court further noted:

Indeed, Lowry does not seek to patent the Attributive data model in the abstract. Nor does he seek to patent the content of information resident in a database. Rather, Lowry's data structures impose a physical organization on the data.

In re Lowry, at 1034.

And, on the issue of abstract ideas, the Federal Circuit in In re Lowry noted:

More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory. According to Lowry, the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily

accessed, stored, and erased. Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation.

In re Lowry, at 1035.

The claims at issue (e.g., claim 11) are analogous to the claims in In re Lowry, and as such are clearly statutory subject matter. Unlike the claims of In re Warmerdam, the claims of the subject application do not recite mathematical equations, or the generation of data structures using mathematical equations. Instead, as in In re Lowry, claim 11 recites a computer readable medium storing a specific data structure that dictates how application programs reproduce data. Accordingly, because the computer readable medium recited in claim 11 includes a data structure having an information area, which provides information files for managing reproduction of video and/or audio and graphic data, claim 11 is clearly directed towards patentable, statutory subject matter.

In the language of MPEP §2106.01 regarding **functional** descriptive material, claim 11 is directed to "a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory."

In light of the above, Applicants respectfully request that the rejection of independent claim 11, and claims depending therefrom, under 35 U.S.C. § 101 be withdrawn.¹

¹ The Examiner may also find it helpful to review AT&T Corp. v. Excel Communications Inc., 50 USPQ2d 1447 (Fed. Cir. 1999).

Claim Rejections under 35 U.S.C. §103

Claims 1-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kitamura et al. (US 5,758,007), hereinafter "Kitamura," and Yamaguchi et al. (US 6,631,241), hereinafter "Yamaguchi." Applicants respectfully traverse this rejection.

Claim 1

Claim 1 requires, *inter alia*, color control information "used in common for screen display by the plurality of graphic objects." This feature is not disclosed or suggested in Kitamura, Yamaguchi, or a combination of the two (assuming Kitamura and Yamaguchi can be combined, which Applicants do not admit).²

Yamaguchi discloses a multimedia optical disc and disc reproduction apparatus which can superimpose subtitles onto a main video image at the producer's desired position. However, Yamaguchi does not disclose or suggest using color control information "used in common for screen display by the plurality of graphic objects," as required by claim 1.

Kitamura discloses a method of generating a sub-picture unit 30 wherein a display control command SET_DAREA determines the location of display captions and/or images. The color of the captions, the background color of the caption area and the ratio of the caption color and background color with respect to the video main picture are determined by the parameters of display control commands SET_COLOR and SET_CONTR.³

² To be thorough, further expedite prosecution, and for the sake of clarity, Applicants provide discussions of each of the references separately, however, Applicants are not attacking these references individually, but arguing that the references, even taken in combination, fail to render the claimed invention obvious because all features of claim 1 are not found in the prior art.

³ Col. 37, lines 24-51 of Kitamura.

The Examiner relies upon column 37, lines 25-51, of Kitamura to teach the color control information “used in common for screen display by the plurality of graphic objects,” of claim 1. But, in Kitamura there is no disclosure of color control information being used in common with the graphic objects. Kitamura discloses display control commands SET_COLOR and SET_CONTR to control the color, but Kitamura does not disclose whether the color information is commonly used by all graphic objects. Accordingly, Kitamura does not disclose color control information “used in common for screen display by the plurality of graphic objects,” as required by claim 1.

Claim 1 is patentable because neither Kitamura, Yamaguchi nor a combination of the two (assuming they can be combined, which Applicants do not admit) discloses color control information “used in common for screen display by the plurality of graphic objects.” The claims dependent on claim 1 are patentable for at least the reasons set forth above regarding claim 1.

Independent claims 11, 18, 24, 27 and 30, and their respective dependent claims, are patentable for at least reasons somewhat similar to those set forth above with regard to claim 1.

For at least the foregoing reasons, Applicant respectfully requests that the rejections of these claims be withdrawn.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the claims in connection with the present application is earnestly solicited.

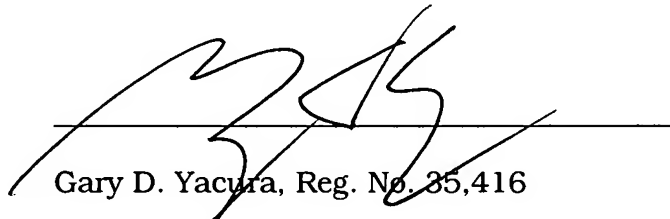
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gary D. Yacura at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By



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